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NRO REVIEW COMPLETED

11 DEC 1966

ACTIVITY REPORT
OFFICE OF SPECIAL ACT TIES
NOVEMBER 1966

I. CXCART

A. DEVELOPMENT SUMMARY AND PROGRESS

1. AIRFRAME

No change.

2. PROPULSION

a. A flight test program was initiated on Aircraft #127 to evaluate various designs of Main Engine Fuel Control Tt2 (compressor inlet temperature) Sensors as a result of recent failures, see October OSA Activities Report [redacted] Test sensors were strain gaged in an effort to determine if any particular condition of flight produces stresses which might affect their structural integrity. Flight data includes EGT (exhaust gas temperature), engine RPM and Tt2 in order to determine the response rate and accuracy of EGT and RPM scheduling of main fuel controls in combination with various Tt2 sensors. The flight test program is nearly complete with the preliminary analysis of the data gathered to date indicating the presently specified sensor design (center strut supported, three loop coil) provides the best combination of response rate and structural integrity. Ten units of this design have been received [redacted] with further deliveries presently programmed at a rate of three to four units per week.

b. Detachment aircraft were grounded, as a precautionary measure, for approximately ten days in November due to an undefined contaminant being discovered in the fuel tanks of several aircraft. The contaminant was later attributed to be a chemical derivative of improperly cured fuel tank sealant material. Laboratory tests determined the contaminant as insoluble in fuel over the temperature range the fuel encounters in operations. As a result, the foreign particles, when they occur in the tank, will be screened out by the aircraft and engine fuel filtering system.

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c. Several range extension test flights were conducted on flight test aircraft #121. The major propulsion system modification incorporated on these flights involves an improved seal system for the "basket" assembly which constitutes the forward bypass bleed door system. Carefully fitted U-shaped stainless steel seals are being utilized in lieu of the standard Viton seals in this area. Preliminary results of these tests indicate that inlet leakage air has been reduced from 8% to 3% of the air entering the inlet. The early results indicate an inlet recovery of approximately 76.5% which was reduced somewhat due to the inlet forward bypass doors being open an average of .3 inches. A planned revision of the forward door position/pressure schedule, to assure that the forward doors are closed at Cruise Mach numbers, with the improved seals, could potentially raise the inlet recovery to approximate the design matched inlet recovery value of 80%.

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3. PAYLOAD



c. Seven (7) photo configuration sorties were flown with the following results.

<u>Type</u>	<u>No. of Flights</u>	<u>Remarks</u>
I	Two (2)	Satisfactory
II	Two (2)	Satisfactory
IV	Three (3)	(1) Satisfactory (2) Unsatisfactory*

*One shutdown after nine (9) minutes operation caused by malfunctioning V/H sensor which caused film to wrap around metering and transport roller. One malfunction after ten (10) minutes of operation caused by defective 400 cycle relay feeding the V/H sensor. 25X1

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4. AIRCRAFT FLIGHT TEST SUMMARY

<u>Aircraft</u>	<u>Flights November</u>	<u>Time November</u>	<u>Total Flights</u>	<u>Total Hours</u>
121	5	6:51	254	273:04
122	-	-	157	169:39
123	-	-	78	136:10
124	17	30:40	531	937:50
125	4	6:55	198	320:10
126	-	-	104	169:16
127	3	4:45	179	305:10
128	4	9:35	162	299:30
129	4	10:40	186	240:29
130	2	2:25	146	252:13
131	4	9:45	96	157:05
132	1	1:15	126	208:57
133	-	-	9	8:17
Totals	44	82:51	2226	3477:50

B. OPERATIONAL SUMMARY AND PROGRESS1. EMERGENCY CAPABILITY (SKYLARK):

No change.

2. CONTINGENCY PLANNING - FAR EAST (PINWHEEL):

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No change.

4. FORWARD BASE EXERCISE:

A Forward Base Exercise was conducted from Kadena Air Base, Okinawa, during the week of 14 November 1966. Purpose of this FBX was to exercise all procedures required to fly a PINWHEEL operational mission. Notification procedures through JCS/JRC to CINCPAC, radar suppression and air space blocking in all areas of operation and weather scout procedures were exercised and found to be adequate. In addition, Detachment, host base and supporting commands were exercised. Overall the FBX was highly successful and there were no problem areas that would preclude flying operational PINWHEEL missions this date.

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5. PROJECT PILOT INVENTORY:

a. [] Project Pilots are currently operationally ready.

b. [] newly assigned Project Pilots in training for operationally ready status.

6. A-12 AIRCRAFT:

No change.

7. PERFORMANCE STATISTICS:

a. All performance statistics as reported in October 1966 report [] remain unchanged with the following exceptions:

1. Average A-12 Time-Operationally Ready Detachment Pilots..... []

2. Assigned Detachment Pilots..... []

II. IDEALIST

A. DEVELOPMENT SUMMARY AND PROGRESS

1. A U-2R Cockpit Mock-up Review meeting was held at Lockheed Aircraft, Burbank, California, on 29 and 30 November. In addition to a detailed cockpit critique by pilots in full pressure suits, the model specifications, spares support and the baseline configuration with respect to [] Com-Nav equipment were reviewed. At this time, no specific problem areas could be identified and the program is proceeding on schedule.

B. OPERATIONAL SUMMARY AND PROGRESS

1. GENERAL SUMMARY

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e. Two successful flight tests were flown during the month for checking out the modified "H" configuration in preparation for the shipment [redacted] of this unit. 25X1

f. One flight test was flown for the purpose of obtaining fuel data with a 1720 gallon load. Excellent fuel consumption information was obtained and the test was classified as successful.

2. PRODUCT IMPROVEMENT

a. Four APN-153/ASN-66 Doppler Navigation Systems have been contracted for with the first system delivery scheduled for January 1967.

b. No tests were flown on the Air Data Computer/Tape Altimeter due to the higher priority of other requirements. Tests should be completed during the month of December.

III. ISINGLASS

No change.

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